Project: “Wizard of Camelot” Unity C# Game
Portfolio: CSCE 306 Spring 2024
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Design Document Version: 4.0

Design Doc Summary:
This example outlines a simple initial plan for a Unity game titled “Wizard of Camelot”, covering scope, audience, platform, goals, features, technical considerations, wireframes, and setting the direction for subsequent steps in the design process. It serves as a foundation that can be referenced in subsequent steps to see if progress is being made towards the final (deployment) goal state.

Scope:
- Initially, focus on getting a playable character that is able to move and feels good to control.
- No hard time restriction or deadline on the final product. Add more and more features as needed.

Target Audience:
- Anyone looking to try out a game, or employers to see my abilities or experience in making games.

Platform:
- Develop with Unity with coding in Microsoft Visual Studio 2022. If the game feels good to play and I am proud of it, possibly upload to Steam to share with others.

Goals:
- Create a playable game using the Unity 2D engine and coding in C#.
- Having basic movements and several unique attacks a player character can perform.
- Have hostile enemies to fight and a final boss to complete the game.

Features and Prioritizations:

1. Sprite Creation
Feature Description: Create sprites for the player character, character magic attacks (fireball, ice shard, electricity, etc.), basic enemies, boss enemy, health bars, etc.
Priority: High
Rationale: Having basic sprites ready to be used will make the game easier to visualize when programming, and they can be updated later if need be. The game can start with very basic sprites and be updated once the final design of the game is implemented.

2. Basic Character Movement and Attacks
Feature Description: Have the player character be able to move in 8 directions using the keyboard. Have them emit a selected magic attack when the space bar is clicked in the direction they are facing.
Priority: High
Rationale: Having the player be able to move and attack is the core gameplay of the game, and all other features are built around it.

3. Enemy Movement and Collision
Feature Description: Enemy characteristic to move toward the player character and deal damage to them on contact. Also need magic attacks to damage enemies on contact and get rid of them when they are hit or when health is zero.
Priority: Medium
Rationale: Essential for the gameplay of the game, although research into enemy tracking will be needed to have enemies gradually move towards the player.

4. Boss Fight
Feature Description: Once a certain number of enemies are defeated, a small animation will play and a boss enemy will appear with a different sprites and attacks.
Priority: Medium
Rationale: Boss fight is a good way to end the game, although not 100% necessary if time does not allow.

5. UI and Sound
Feature Description: Have start screen, game over screen, pause screen, and sound effects for when player or enemies are hit or spells are cast. Add chiptune style background music. Also have button prompts so players know how to play in the game if they missed instructions.
Priority: Low
Rationale: UI are important for making the game look nice, but not 100% necessary. Focus on core gameplay features first to have a final working product.

<u>Technical Considerations:</u>

1. Game Accessibility
Consideration: Research how games on Unity are delivered to players and on which platforms. How will players download and launch the .exe file to launch the game?

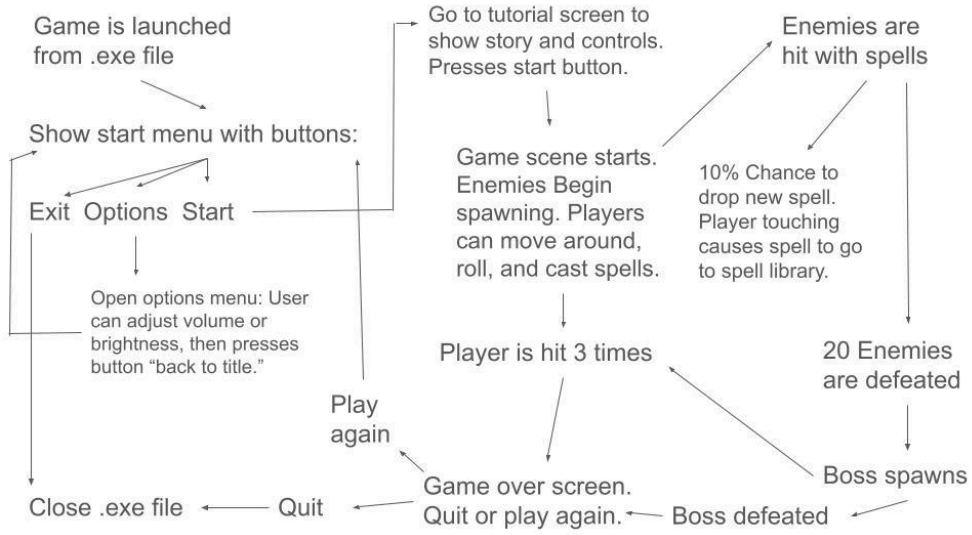
2. Game Features and Optimisation

Consideration: See which features are able to be implemented like pause menus, volume adjustments, brightness, difficulty levels, etc. Also make sure objects that are no longer used in the game are deleted so as not to cause memory leaks or performance issues.

Sample Wireframe and Case Scenarios:

https://docs.google.com/presentation/d/1xYWczUxJCc2_7Epk88tvK600CspvaJURVx59GN7sfC8/edit?usp=sharing

Scenarios (Text):



Version Control:

- I will be using GitHub to store the individual components of the project, that way players have access to the code and elements of the game. This will also help with working from multiple places and possibly collaborating with others if that should happen in the future.

Summary:

When creating this project, the things to prioritize most are the sprites and basic character movements and attacks. From there more features and UI/SFX can be added, but these are needed first so the game has a core to build off of. From there I can start to create enemies, bosses, and extra mechanics to make the game more fully-fledged and fun. UI/SFX look good and make the game better, but are not technically necessary to play the game and should thus be prioritized less. During the development of the game I should look to optimize it in any way that possible to improve game performance. Upon completion of the project, I need to make sure there is a simple way for players to download and play the game.

Goal:

- The goal of this project is to learn the principles of game design as well as all the other factors that go into creating a video game. The goal is not only to have a fun final project to show to others, but to prove to myself and others that I have what it takes to learn something brand new from applying the skills I have learned at North Central and independently.
- I'm hoping for this project to be fully completed and ready to publish by the end of Fall 2024.